UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

EXPLANATION OF SIGNIFICANT DIFFERENCES

FOR THE

1991 RECORD OF DECISION

AT THE

WESTINGHOUSE SUPERFUND SITE

IN

SUNNYVALE, CALIFORNIA

March 1997

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Introduction

The U.S. Environmental Protection Agency (U.S. EPA) is issuing this *Explanation of Significant Differences (ESD) for the 1991 Record of Decision for the* Westinghouse Superfund Site.

A fact sheet is being sent to community members pursuant to Section 117(c) of CERCLA in order to provide an explanation of a significant difference to the remedial action selected in 1991 for the site.

Site Background

The 75-acre Westinghouse property is located at 401 E. Hendy Avenue in Sunnyvale, California("the site"). The site is bounded by California Avenue to the north, Hendy Avenue to the south, North Sunnyvale Avenue to the west, and North Fair Oaks Avenue to the east (see Figure 1). During the mid-1950's Westinghouse manufactured transformers which contained Inerteen and mineral oil as insulating fluids. Inerteen was the Westinghouse trade name for an askarel consisting of approximately 60 percent polychlorinated biphenyl (PCB, Aroclor 1260) and 40 percent trichlorobenzene (TCB).

Inerteen was stored in a 7,000 gallon aboveground storage tank. Mineral oil was also stored onsite in three 16,000 gallon aboveground storage tanks and one 20,000 gallon underground storage tank. Inerteen liquid and mineral oil were delivered from their associated tanks to two areas of Building 21 via underground piping. The Inerteen tank was removed from the Reservoir 2 area in 1971. The mineral oil tanks were removed prior to 1974. Westinghouse also used Inerteen for weed control around the perimeter of the property and along railroad spurs on the property.

Both soil and groundwater with the highest concentrations were discovered in the vicinity of the tanks. The PCB solubility limit of 2.7 ppb was frequently exceeded in onsite wells located in the source area. Investigations also showed the presence of PCBs along the top of the A/B1 aquitard. A dense non-aqueous phase liquid (DNAPL) thickness of 2.8 feet was discovered in well W48, and a light non-aqueous phase liquid (LNAPL) thickness of 1.1 feet was found in well W3, which is located approximately 70 feet east of the former Inerteen tank. Volatile organic concentrations ranged up to 131 ppb in groundwater.

Contamination was also found in the soils beneath the underground pipelines which delivered chemicals to Building 21 for use in the manufacturing processes. PCB's in soils often exceeded 500 ppm and generally ranged up to 28,000 parts per million (ppm) from the surface to approximately 45 feet below ground surface.

Enforcement History and selected remedy

The California State Regional Water Quality Control Board (RWQCB) was the lead agency for the Site from 1981 to 1987. The RWQCB issued Orders 84-63 and 85-94 in 1984 and 1985. Pursuant to these orders, Westinghouse conducted remediation of shallow soils outside the Reservoir 2 area, and along the railroad spurs and fence lines.

In October 1984, pursuant to Section 105 of CERCLA, 42 U.S.C. Section 9605, the Westinghouse Superfund site was proposed for listing on the Federal Superfund National Priority List (NPL), set forth at 40 C.F.R. Part 300, Appendix B. The listing was finalized in June 1986. EPA assumed the lead oversight role on December 18, 1987. An Administrative Order on Consent for the performance of a Remedial Investigation and Feasibility Study ("RI/FS") was signed by Westinghouse and the EPA on August 20, 1988.

Pursuant to Section 117 of CERCLA, 42 U.S.C. Section 9617, EPA published a notice of the completion of the Feasibility Study, and of the proposed plan for remedial action on June 1, 1991, and provided opportunity for public comment on the proposed remedial action. The public comment period opened on July 1, 1991 and closed on August 29, 1991.

On October 16, 1991, the U.S. EPA signed a Record of Decision (ROD), selecting the following remedy:

1. Permanent **containment**, by means of groundwater extraction, of contaminated groundwater in the source area where DNAPLs are detected;

2. **Restoration** of contaminated groundwater, using extraction, to the California Department of Health Services (CDHS) Action Level for 1,3-Dichlorobenzene(1,3-DCB), the proposed maximum contaminant levels ("MCL") for 1,2,4 Trichlorobenzene(1,2,4-TCB) and the federal and state MCL, **with the exception of the standard for PCB(0.5 ppb) in the onsite source area where DNAPL occurs;**

3. **Treatment** of the extracted groundwater to meet all applicable or relevant and appropriate requirements ("ARARs") identified in the ROD for this discharge, prior to discharge to the onsite storm sewer, unless an evaluation indicates that an alternative "end-use" for the treated effluent (such as use for facility process water) can be practicably implemented;

4. **Removal** of contaminated soil containing greater than 25 parts per million PCB to a depth of eight feet;

5. Offsite **incineration** of excavated soils at a federally permitted facility;

6. **Institutional controls**, such as land use restrictions, to prevent well construction (for water supply purposes) in source areas that remain contaminated. Excavation below the eight feet where soil has been removed will be restricted. Restrictions will also preclude excavation, other than temporary subsurface work in the upper eight feet and will require complete restoration of any disturbed fill or the asphalt cap once any such temporary work was completed;

7. A requirement that EPA receive **notification** of any future intention to cease operations in, abandon, demolish, or perform construction in (including partial demolition or construction) Building 21 (see facility map, Figure 1);

8. **Permanent** and ongoing **monitoring** of the affected aquifers to verify that the extraction system is effective in capturing and reducing the chemical concentrations and extent of the aqueous phase plume, and containing the aqueous phase contamination in the DNAPL source area.

The estimated cost of the remedy in the ROD was $8,300,000. The cleanup plan outlined in the ROD included leaving contamination above health-based levels in both soil and groundwater on the Site. In the absence of a known technology to effectively remove the DNAPL containing PCB from the shallow aquifer, a **technical impracticability waiver** was invoked in the ROD. This legal mechanism waived the requirement to meet the standard for PCB in the source area of the DNAPL. The waiver was invoked because EPA determined that it is not technically feasible to remove PCB DNAPL in the a-aquifer source area, which represented 70 percent of the contaminant mass located in the source area. The other 30% of the total mass of PCB in this area was thought to be in the vadose zone soils. The ROD requires that this area be permanently contained and that land use restrictions prevent access to this contamination. Compliance points were set at the perimeter of the DNAPL source area in the groundwater. The PCB standard must be met at the following well points: W10,

W24, W26, W30, W31, W43, W44, W54, W55, W57, W58, W60, W63, W64, W65, W66, and CCG-2.

Soil cleanup levels were determined based on the historical industrial use of the property, a land use restriction of continued industrial and/or commercial use, and the possibility of workers coming into contact with contaminated soil. The aquifers beneath the site are classified as potential drinking water sources.

Remedial Design/Remedial Action Enforcement History

On February 6, 1992, Westinghouse initiated the work for the remedial design for the selected remedy pursuant to an Administrative Consent Order for Remedial Design (U.S. EPA Docket No. 92-08, February 6, 1992). In accordance with CERCLA Section 122, 42 U.S.C. Section 9622, EPA issued special notice to Westinghouse on March 31, 1992.

On September 29, 1993, EPA issued an Administrative Order for Remedial Design and Remedial Action for the Westinghouse site (U.S. EPA Docket No. 93-05). The 1993 Order directed Westinghouse to implement the Remedial Design by performing the Remedial Action and terminated Docket No. 92-08 except for provisions relevant to EPA's Response Costs.

The remediation contractor mobilized at the site on October 3, 1994. Approximately 1100 tons of contaminated soils was excavated and sent to Aragonite, Utah for incineration. A 20,000 gallon underground storage tank was removed as one of the first tasks of the remedial action. Three monitoring wells and six extraction wells were also installed as part of the groundwater treatment system. Pipelines containing mineral oil and Inerteen were removed from approximately 585 lineal feet of pipeline trench. The designated remedy was constructed between October 3, 1994 and June 1995. The completion reports documenting construction of the groundwater treatment system and removal of contaminated soils were submitted during March and April of 1996.

Site Ownership

On March 1, 1996, the Northrop Grumman Corporation acquired the Westinghouse Electronics Systems Group. This acquisition included the site. Northrop Grumman Corporation is a designer, systems integrator and manufacturer of military surveillance and combat aircraft, defense electronics and systems, airspace management and information systems, marine propulsion, precision weapons and commercial and military aerostructures. The company employs more than 48,000 people, and reported 1995 sales of $6.8 billion.

SUMMARY OF REMEDY MODIFICATIONS

North Parking Lot Background

Westinghouse Electric Corporation informed EPA in 1993 that they were interested in the beneficial redevelopment of the North Parking Lot, which is located across California Avenue from the main plant property. Their contractor conducted Phase I characterization of this area in preparation for selling this land. The characterization occurred in three phases that were reported in letters from EMCON to Westinghouse dated May 6, 1992, August 11, 1992, and July 14, 1993. Copies of these reports were submitted to EPA during 1993. Except for a single sampling point (PCB 729 ppm), PCBs were detected in the Parking lot at concentrations no greater than 210 ppm. The average PCB concentrations found in the North Parking Lot was 150 ppm. Westinghouse has stated their belief that the presence of the PCB's in this area are a result of spraying of PCB fluids as a weed killer.

Westinghouse subsequently requested that EPA provide a determination of whether or not the North Parking Lot was part of the Superfund site. They also requested that any soil remediated from the North Parking Lot allow the alternative disposal of land filling rather than incineration. EPA determined that the North Parking Lot was included as part of the site description in the Record of Decision and was included in the original listing package. Therefore, the North Parking Lot is subject to the provisions of the ROD.

EPA and Westinghouse/Northrop reviewed historical aerial photographs and past sampling data. As a result, EPA does agree that the source of the soil contamination located in the North Parking Lot appears to be reflective of PCB's used as a weed killer. Contaminated soils removed from the **source area** in 1994-5 contained average PCB concentrations of 25,000 ppm, which is much higher than the average 150 ppm levels found in the North Parking Lot.

REMEDY CHANGE

LANDFILLING OF NORTH PARKING LOT SOILS

This ESD is written to change the disposal method for PCB contaminated soils removed from the North Parking Lot area only. Federal regulations for PCBs are derived from the Toxic Substances Control Act (TSCA) and the Resource Conservation and Recovery Act (RCRA). This change in disposal method for PCB contaminated

soils only applies to soils where contamination is thought to have been a result of using PCB's as a weed killer. All soils with PCB concentrations greater than 25 ppm will be excavated. Soils containing **PCB concentrations between 25 ppm and 50 ppm be disposed of at a facility that meets the provisions of RCRA Subtitle C.** This ESD will **allow excavation and transportation to a TSCA Chemical Waste Landfill soils found in the parking lot with concentrations greater than 50 ppm and less than 500 ppm**. The landfill chosen must meet the requirements for TSCA Chemical Waste Landfills as described in 40 CFR Section 761.75, and must be in compliance with the procedures for planning and implementing offsite response actions described in 40 CFR Section 300.440. All soils found during this excavation that have **PCB concentrations greater than 500 ppm will be incinerated** as required in the 1991 ROD.

The 1991 ROD also contains a provision for Institutional Controls at the site. The 25 ppm cleanup number is applicable for industrial land use only. The North Parking Lot can only be used for industrial and or commercial applications. A copy of this ESD must also be filed with the deed in the County Recorder's Office along with a map showing the specific areas to which it applies.

JUSTIFICATION FOR CHANGE OF DISPOSAL METHOD

TSCA was listed as a "to be considered" ARAR in the 1991 Record of Decision. TSCA regulations and OSWER Directive No. 9355.4-01 define PCB "principal threat" as soils containing greater than 500 ppm PCB. All soils found in the plant area were deemed "principal threat", therefore EPA's decision was to remove and incinerate those soils. The TSCA regulation allows for landfilling or incineration for soils found with concentrations less than 500 ppm. Sampling results show that soils contaminated with PCB in the North Parking Lot contain average concentrations of 150 ppm. Therefore, in accordance with 40 CFR Section 761.60, Disposal requirements, Westinghouse/Northrop may dispose of soils recovered from the North Parking Lot with PCB concentrations less than 500 ppm in a TSCA approved Chemical Waste Landfill.

SOIL CLEANUP SCHEDULE

In a letter dated April 23, 1996, EPA directed Westinghouse/Northrop to submit a Workplan for the removal of PCB's with concentrations greater than 25 ppm from the Parking Lot. Westinghouse/Northrop submitted the Remedial Action Work Plan for the North Parking Lot on December 20, 1996. Cleanup of the North Parking Lot will start during April 1997.

Approximately 1000 tons of contaminated soil, with PCB concentrations between

25 and 50 ppm will be excavated from the North Parking Lot. Soils will be sent to the RCRA Sub-title C Section of the Laidlaw Facility, which is located in Buttonwillow, California. This facility is located 36 miles west of Bakersfield, California. Approximately 1500 tons of contaminated soil, with PCB concentrations between 50 and 500 ppm will also be excavated from the North Parking Lot and sent to Grayback Mountain. Grayback Mountain is a TSCA facility operated by U.S. Pollution Control, Inc., and is located 85 miles west of Salt Lake City, Utah. Westinghouse/Northrop does not expect to encounter any soils with concentrations greater than 500 ppm. If these "principal threat" soils are encountered they will be sent to the Aptus Facility in Aragonite, Utah for incineration. This facility is located approximately 80 miles west of Salt Lake City, Utah. Addresses and phone numbers for these approved disposal facilities are given in Appendix 1.

The North Parking Lot excavation and removal is scheduled to be completed by June 1997. Westinghouse/Northrop anticipates the transfer of approximately three acres of the North Parking Lot to the new property owner during June 1997. The new owner will construct a commercial building on the three acres purchased and the Westinghouse/Northrop acreage will remain a parking lot for the near future.

Opportunity for Public Participation:

This Explanation of Significant Differences and the Remedial Action Workplan for the North Parking Lot Soils will be placed in the local repository.

The local repository for the Westinghouse Superfund Site is:

Sunnyvale Public Library
665 West Olive Avenue
Sunnyvale, CA 94088

Documents will also be maintained at:

U.S. EPA Region 9
Superfund Records Center
95 Hawthorne Street
San Francisco, CA 94105

In addition EPA conducted a community meeting to discuss the Explanation of Significant Differences and the onsite construction activities with local residents on February 20, 1997.

Support Agency Comments:

The Bay Area Regional Water Quality Control Board concurs with the above changes to the selected remedy.

Affirmation of Statutory Determination

Considering the new information that has been developed from additional sampling of the North Parking Lot and the changes that have been made to the selected remedy, the U.S. EPA believes that the remedy remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective.

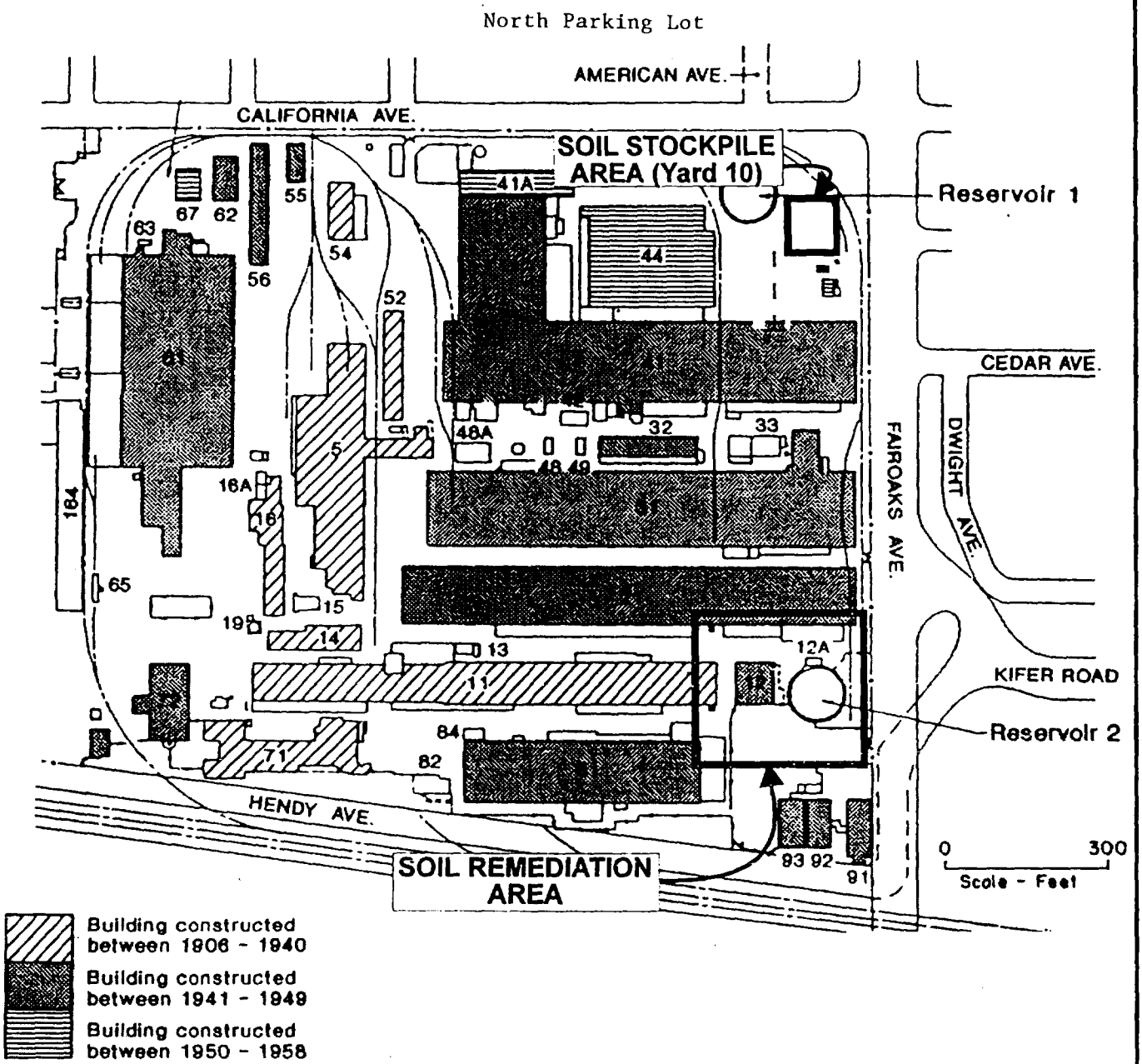
Keith A. Takata
Director
Superfund Division

SIGNED MARCH 14, 1997

APPENDIX 1

FACILITIES APPROVED UNDER EPA'S OFF-SITE RULE (Proposed by WESTINGHOUSE)

Aptus, Inc. (incinerator) (PCB > 500ppm)	1600 N. Aptus Road (site) Aragonite, UT 84029	801- 531- 4200 (Fax) 801- 531- 4394
U.S. Pollution Control, Inc. TSCA (PCB 50ppm - 500 ppm)	Grayback Mountain P. O. Box 22750Fax 801 323-8990 Salt Lake City, UT 84122	801 323-8900
Laidlaw Environmental Services CAD980675276 RCRA Subtitle C TSD (PCB 25 ppm - 50 ppm)	2500 West Lokern Road Buttonwillow, CA 93206	805 762-7372



Westinghouse Superfund Site
Soils Remediation Completion Report

SITE PLAN

FIGURE 1 March, 1996

ALTA Geosciences, Inc.

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I concur with the attached Explanation of Significant Differences for the Westinghouse Superfund Site.

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